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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,337	01/16/2001	Frederick J. Schultz		2155

7590 08/16/2004

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EXAMINER	
DASS, HARISH T	

ART UNIT	PAPER NUMBER
3628	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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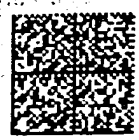

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ROUTE # INITIALS

Office Action Summary	Application No.	Applicant(s)	
	09/759,337	SCHULTZ, FREDERICK J.	
	Examiner	Art Unit	
	Harish T Dass	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/16/2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-72* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-72* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-17, 28-42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See In re Musgrave, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable

subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See Diamond v. Diehr, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See State Street Bank & Trust Co. v. Signature Financial Group, Inc. 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See In re Toma, 197 USPQ (BNA) 852 (CCPA 1978). In Toma, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to Gottschalk v. Benson, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. In re Toma at 857.

In Toma, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The

court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in State Street Bank & Trust Co. v. Signature Financial Group, Inc. never addressed this prong of the test. In State Street Bank & Trust Co., the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See State Street Bank & Trust Co. at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under °101, but rather under §§102, 103 and 112." See State Street Bank & Trust Co. at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, State Street abolished the Freeman-Walter-Abele test used in Toma. However, State Street never addressed the second part of the analysis, i.e., the "technological arts" test established in Toma because the invention in State Street (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the Toma test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a

§101 rejection finding the claimed invention to be non-statutory. See Ex parte Bowman, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, Claims 1-17, 28-29, 31-42 have no connection to the technological arts. None of the steps indicate any connection to a computer or technology. Therefore, the claims are directed towards non-statutory subject matter. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the steps are being performed within the technological arts; for example: "computer is used to calculate average ..."

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 16-18, 26-29, 43, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cristofich et al (hereinafter Cristofich – US 5,671,363) in view of Dembo (US 5,799,287).

Re. Claim 1, 16-18, 26-29, 43, and 57 Cristofich discloses a data processing system, management of stock option accounts for plurality of participants with several distinct option plans that governs the transaction choices available to the participants [see entire document particularly abstract; Figure 1; C1 L5 to C2 L3], receiving an option-

exercising scenario (rules) for a stock option grant [C12 L50-L67; C5 L50 to C6 L64], and calculating the optimal strategy for the selected estimate using the risk tolerance information, the financial ability information and accounting, legal, estate planning and financial planning best practices information [C1 L60 to C2 L3] and magnetic disk (machine-readable medium) [C3 L19-L20]. Cristofich does not explicitly discloses calculating an estimate for the option-exercising scenario for the stock option grant, comparing the estimate for the option-exercising scenario for the stock option grant against an estimate based on a standard strategy option-exercising scenario, and calculating an optimal strategy to maximize the value of the stock option grant based on one of the estimate for the option-exercising scenario for the stock option grant and the estimate based on the standard strategy option-exercising scenario, and establishing an account for a client, assigning a password to the account, assigning a client access level to the account.

However, Dembo {287} discloses calculating an estimate for the option-exercising scenario for the stock option grant, comparing the estimate for the option-exercising scenario for the stock option grant against an estimate based on a standard strategy option-exercising scenario [abstract; C1 L5-L45; C5 L7-L27; C7 L52 to C8 L20; C18 L30-L50], and calculating an optimal strategy to maximize the value of the stock option grant based on one of the estimate for the option-exercising scenario for the stock option grant and the estimate based on the standard strategy option-exercising scenario, and receiving a selection of one of the estimate for the option-exercising scenario for the stock option grant and the estimate based on the standard strategy

option-exercising scenario, receiving risk tolerance (or degree of risk) information, receiving financial ability information, calculating the optimal strategy for the selected estimate using the risk tolerance information and the financial ability information [see entire document particularly, abstract; C1 L5-L45; C5 L7-L27; C7 L52 to C8 L20; C18 L30-L50], and calculating the optimal strategy for the selected estimate using the risk tolerance information [C2 L54 to C3 L11] to generate a set of buy/sell recommendations which the portfolio manage may execute to optimally insure the target portfolio against significant losses.

Further, establishing an account for a client, assigning a password to the account, and assigning a client access level to the account are well known. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to combine disclosures Cristofich and Dembo {287} to use optimization scenarios to calculate the future value of an instrument with maximum possible profit that can be extracted over the life of the trade is then determined.

Claims 2-6, 14-15, 19-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Cristofich in view of Dembo {287} as applies to claims 1 & 18 above, and further in view of Klein et al (hereinafter Klein – US 6,709,330).

Re. Claims 2-6, 14-15, 19-25, Dembo {287} discloses calculating the estimate based on a black-scholes-based strategy option-exercising scenario using information received

on how to execute and fund the option-exercising scenario and Cristofich discloses and receiving tax information for the option-exercising scenario [C1 L5-L66].

Cristofich or Dembo {287} does not explicitly disclose receiving a request to access a stock option management system via the communications network, and granting access to the stock option management system, receiving a user request to logon to the stock option management system, requesting user identification information, receiving the user identification information, verifying the user identification information, establishing a secure connection to the user, receiving information on the stock option grant, an identification of a stock, a grant date, a total number of shares, a vesting schedule for the total number of shares, an option price, an expiration date, displaying a company associated with the stock, receiving a selection of the company associated with the stock, receiving an historical returns period selection for the stock, receiving a time period for which to calculate the forecast, receiving at least one estimated future price for the stock, receiving a confidence level for the at least one future price, receiving a level of accuracy for the analysis. calculating the future price curve, displaying the future price curve with an indication of the likelihood of achieving each price on the future price curve, saving selected price point forecasts from the price curve, displaying the saved price point forecasts, and receiving a selection of a stock for the option-exercising scenario, receiving information on how to execute the option-exercising scenario, and receiving information on how to fund the exercise of the option-exercising scenario. However, Klein substantially discloses these steps [see entire document particularly, Abstract; Figures 7, 9, 11-13, 20; C1 L1-65; C4 L38-L50; C5 L25-L50] to provide a real-

world options market and trading environment via Internet. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to combine disclosures Cristofich, Dembo {287} and Klein to enable investors to interactively learn and trade options with option game that simulates real options trading.

Claims 9-13, 30-42, 44-56 & 58-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cristofich in view of Dembo {287} as applies to claims 1, 29, 43 & 57 above, and further in view of Klein and Dembo et al (US 6,278,981).

Re. Claims 9-13, Cristofich, Dembo {287} or Klein does not explicitly disclose wherein the at least one future price defines the price of the stock one year and one day from the date of the option grant, wherein the at least one future price is at least one of. a most likely future stock price, a worst case future stock price, and a best case future stock price, wherein the confidence level specifies a level of historical stock performance to be used to calculate a forecast for one of the at least one future price of the stock, wherein the confidence level is measured on a continuous scale, the continuous scale ranging from a low confidence level to a high confidence level, wherein a low confidence level indicates the use of the stock's historical performance to calculate the forecast, wherein a high confidence level indicates the use of the at least one future price to calculate the forecast, wherein a medium confidence level indicates

the use of approximately 50% of the stock's historical performance and approximately 50% of the at least one future price to calculate the forecast. However, Dembo {981} substantially discloses these steps [Abstract; Figure 5; C1 L8 to C3 L33; C12 L35-L65; C22 L7-L63] to calculated the VaR number for different confidence levels. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the disclosure of Cristofich and include different confidence levels, as discloses by {981}, to compare the value at risk results.

Re. dependant method claims 30-42, these claims are parallel claims with claim 2-17 and are rejected with same rational as claims 2-17.
Re. dependant machine-readable medium claims 44-56 and dependant apparatus claims and 58-72, these claims are parallel claims of claims 2-17 and are rejected with same rational as claims 2-17.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harish T Dass whose telephone number is 703-305-4694. The examiner can normally be reached on 8:00 AM to 4:50 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S Sough can be reached on 703-308-0505. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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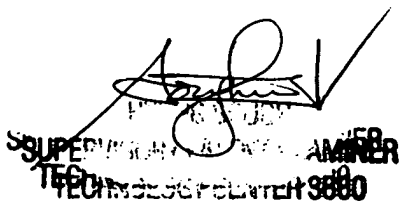
Harish T Dass
Examiner
Art Unit 3628

8/9/04



Notice of References Cited	Application/Control No. 09/759,337	Applicant(s)/Patent Under Reexamination SCHULTZ, FREDERICK J.	
	Examiner Harish T Dass	Art Unit 3628	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,709,330 B1	03-2004	Klein et al.	463/9
	B	US-6,278,981 B1	08-2001	Dembo et al.	705/36
	C	US-5,671,363	09-1997	Cristofich et al.	705/37
	D	US-5,799,287	08-1998	Dembo, Ron S.	705/36
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	F	US-			
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